

Notice of Allowability

Application No.

10/680,086

Examiner

Alex Liew

Applicant(s)

GULER, SADIYE

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/7/07.
2. ☒ The allowed claim(s) is/are 1-7,9,11-17,19-24,26-28,30 and 31.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

JINGGE WU
SUPERVISORY PATENT EXAMINER

Art Unit: 2624

The amendment filed on September 7, 2007 is entered and made of record.

REASONS FOR ALLOWANCE

Claims 1 – 7, 9, 11 – 17, 19 – 24, 26 – 28, 30 and 31. The following is an examiner's statement of reasons for allowance:

With regards to claim 1, the examiner cannot find any applicable prior art and / or suggestions disclosing a split behavior formula identification applies the formula $\hat{A}_i^{k+1} \cap (A_i^{k+1} \cup A_j^{k+1}) \neq 0$ and $m(\hat{A}_i^{k+1}) = r m(A_i^{k+1} \cup A_j^{k+1})$ in combination with the rest of the limitations of claims 1.

With regards to claim 21, the examiner cannot find any applicable prior art and / or suggestions disclosing a merge behavior identification applies the formula $A_i^{k+1} \cap (\hat{A}_i^{k+1} \cup \hat{A}_j^{k+1}) \neq 0$ and $m(A_i^{k+1}) = r m(\hat{A}_i^{k+1} \cup \hat{A}_j^{k+1})$ in combination with claims 1.

With regards to claim 31, the examiner cannot find any applicable prior art and/or suggestions disclosing generating the hidden Markov model (HMM) includes generating a two-level HMM, wherein the first level HMM includes seven states, and the second level includes a plurality of sub-HMMs, the sub-HMMs being stand alone HMMs and wherein the sub-HMMs are defined for people, person and package split or merge interaction in combination with the rest of the limitations of claim 31.

Relevant Art

Lin (US pat no 7,076,102): Lin discloses an automatic learning and identifying events in image data using hierarchical HMMs to define and detect one or more events. The hierarchical HMMs include multiple paths that encompass variations of the same event and provide a framework for defining events that may be exhibited in various ways. Each event is modeled in the hierarchical HMM with a set of sequential states that describe the paths and these models can then be used to analyze video sequences to segment and recognize each individual (see figure 6). Lin does not disclose having seven HMM states and a plurality of sub-HMM states, wherein the sub-HMMs are defined for people, person and package split or merge interaction

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex Liew whose telephone number is (571)272-8623. The examiner can normally be reached on 9:30AM - 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alex Liew
AU2624
11/6/07

JINGGE WU
SUPERVISORY PATENT EXAMINER

